

ANALISIS TOTAL SERAT PANGAN, DAYA CERNA, DAN AMILOSA-AMILOPEKTIN PADA PATI RESISTEN TIPE III UMBI GANYONG (*Canna edulis* Ker Gawl.) VARIETAS MERAH DAN PUTIH

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INTISARI

Umbi ganyong (*Canna edulis* Ker Gawl.) merupakan sumber karbohidrat lokal yang memiliki potensi dikembangkan sebagai bahan pangan fungsional melalui pembentukan pati resisten. Tujuan penelitian ini, yaitu untuk menganalisis kandungan total serat pangan dan daya cerna pati resisten tipe III (RS3) pada umbi ganyong varietas merah dan putih yang dimodifikasi melalui proses gelatinisasi dan retrogradasi menggunakan metode *autoclaving-cooling*. Pati ganyong native dan pati resisten dianalisis kandungan total serat pangan secara enzimatis-gravimetri, daya cerna pati secara *in vitro*, serta kadar amilosa dan amilopektin. Berdasarkan hasil penelitian, perlakuan *autoclaving-cooling* mampu meningkatkan kandungan total serat pangan pati ganyong merah dan putih masing-masing sebesar 2% dan 1,87% dibandingkan pati native, dengan peningkatan dominan pada fraksi serat tidak larut. Daya cerna pati mengalami penurunan signifikan, yaitu sebesar 0,9 g/100 g pada ganyong merah dan 1,33 g/100g pada ganyong putih. Selain itu, perlakuan tersebut meningkatkan kadar amilosa sebesar 2,67% pada ganyong merah dan 3% pada ganyong putih, disertai penurunan kadar amilopektin sebesar 2,67% dan 3%. Dapat disimpulkan bahwa pati resisten tipe III dari umbi ganyong berpotensi dikembangkan sebagai bahan pangan fungsional tinggi serat dan berdaya cerna rendah.

KATA KUNCI: daya cerna, ganyong, pati resisten, pemanasan-pendinginan, total serat pangan

**ANALYSIS OF TOTAL DIETARY FIBER, STARCH DIGESTIBILITY,
AND AMYLOSE–AMYLOPECTIN CONTENT IN TYPE III RESISTANT
STARCH FROM RED AND WHITE VARIETIES GANYONG TUBERS
(*Canna edulis* Ker Gawl.)**

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ABSTRACT

Ganyong tuber (*Canna edulis* Ker Gawl.) is recognized as a local carbohydrate source that can be utilized in the development of functional foods by producing resistant starch. This study aimed to analyze the total dietary fiber content and starch digestibility of type III resistant starch (RS3) from red and white ganyong tubers modified through gelatinization and retrogradation using the autoclaving–cooling method. Native ganyong starch and resistant starch were analyzed for total dietary fiber content using the enzymatic–gravimetric method, in vitro starch digestibility, and amylose and amylopectin contents. The results showed that autoclaving–cooling treatment increased the total dietary fiber content of red and white ganyong starch by 2% and 1.87%, respectively, compared to native starch, with a predominant increase in the insoluble fiber fraction. Starch digestibility decreased significantly by 0.9% in red ganyong and 1.33% in white ganyong. In addition, the treatment increased amylose content by 2.67% in red ganyong and 3% in white ganyong, accompanied by decreases in amylopectin content of 2.67% and 3%, respectively. These results indicate that type III resistant starch from ganyong tubers is a promising high-fiber, low-digestibility ingredient for functional food applications.

KEYWORDS: autoclaving–cooling, digestibility, ganyong, resistant starch, total dietary fiber